Amendment to the Claims

Claims 1-9 (canceled)

10. (new) A computer implemented aggregate risk model for a plurality of asset classes, where construction of the aggregate risk model comprises the steps of:

integrating a plurality of factor models corresponding to the plurality of asset classes, where integration of the plurality of factor models is based at least in part on:

one or more global factors (g) that capture covariance among factors (f) associated with the plurality of factor models; and

exposures (Y) of the factors (f) associated with the plurality of factor models to the one or more global factors (g).

11. (new) The aggregate risk model of claim 10, wherein the one or more global factors (g) are data representative of a time series of global factor returns, and the factors (f) are data representative of a time series of factor returns for the plurality of factor models for the plurality of asset classes.

12. (new) The aggregate risk model of claim 11, where integration is further based at least in part on:

data representative of a covariance matrix (G) of the one or more global factors (g); and

data representative of a covariance matrix (Φ) of residuals (ø).

13. (new) The aggregate risk model of claim 12, wherein residuals (ø) are data representative of a time series of the purely local part of the factor returns of (f).

14. (new) The aggregate risk model of claim 13, wherein the values of f, Y, g and ø conform to $f=Yg + ø$, and wherein substantially all sources of common covariance between the factors in distinct asset classes are captured.

15. (new) The aggregate risk model of claim 14, where integration is further based at least in part on:

data representative of a factor covariance matrix (F).

16. (new) The aggregate risk model of claim 15, wherein the data representative of the factor covariance matrix (F), comprises data representative of one or more blocks comprising the factor covariance matrix (F).

17. (new) The aggregate risk model of claim 16, wherein the values of F, Y, G and Φ conform to $F=YGY^t + \Phi$.

18. (new) The aggregate risk model of claim 17, wherein F is an initial estimate that is then rescaled to bring its diagonal blocks into agreement with the corresponding blocks of factor covariance matrices of the plurality of factor models, whereby a final estimate of F is achieved.

19. (new) The aggregate risk model of claim 18, wherein the initial estimate of F is linearly rescaled with a matrix R, whereby the final estimate RFR^t is achieved.

20. (new) The aggregate risk model of claim 19, wherein an asset-by-asset covariance matrix is formed based on data representative of the final estimate of F, exposures (X) of the factors (f) associated with each of the plurality of factor models, and specific covariance data (D) associated with each of the plurality of factor models, in conformance with XFX^t+D, wherein F is the final estimate of F.

21. (new) A computer implemented method for constructing an aggregate risk model for a plurality of asset classes, comprising the steps of:

integrating a plurality of factor models corresponding to the plurality of asset classes, where integration of the plurality of factor models is based at least in part on data derived from the steps comprising:

determining one or more global factors (g) that capture covariance among factors (f) associated with the plurality of factor models; and

determining exposures (Y) of the factors (f) associated with the plurality of factor models to the one or more global factors (g).

22. (new) The method of claim 21, wherein the one or more global factors (g) are data representative of a time series of global factor returns, and the factors (f) are data representative of a time series of factor returns for the plurality of factor models for the plurality of asset classes

23. (new) The method of claim 22, where integration is further based at least in part on data derived from the steps comprising:

determining data representative of a covariance matrix (G) of the one or more global factors (g); and

determining data representative of a covariance matrix (Φ) of residuals (ø).

24. (new) The method of claim 23, wherein residuals (ø) are data representative of a time series of the purely local part of the factor returns of (f).

25. (new) The method of claim 24, wherein the values of f, Y, g and ø conform to f=Yg + ø, and wherein substantially all sources of common covariance among the factors (f) are captured.

26. (new) The method of claim 25, where integration is further based at least in part on data derived from the steps comprising:

determining data representative of a factor covariance matrix (F).

27. (new) The method of claim 26, wherein the data representative of the factor covariance matrix (F), comprises data representative of one or more blocks comprising the factor covariance matrix (F).

28. (new) The method of claim 27, wherein the values of F, Y, G and Φ conform to $F=YGY^t + \Phi$.

29. (new) The method of claim 28, wherein integrating further comprises the step of rescaling an initial estimate of F to bring its diagonal blocks into agreement with the corresponding blocks of factor covariance matrices of the plurality of factor models, whereby a final estimate of F is achieved.

30. (new) The method of claim 29, wherein the step of rescaling further comprises linearly rescaling with a matrix R, whereby the final estimate RFR^t is achieved.

31. (new) The method of claim 30, wherein integrating further comprises the step of forming an asset-by-asset covariance matrix based on data representative of the final estimate of F, exposures (X) of the factors (f) associated with each of the plurality of

factor models, and specific covariance data (D) associated with each of the plurality of factor models, in conformance with XFX^t+D.

32. (new) A computer implemented aggregate risk model for a plurality of asset classes, where construction of the aggregate risk model comprises the steps of:

integrating a plurality of factor models corresponding to the plurality of asset classes, where integration of the plurality of factor models is based at least in part on:

data associated with the plurality of factor models corresponding to the plurality of asset classes; and

an estimated factor model with one or more global factors (g) that captures the covariance among factors (f) associated with the plurality of factor models.

33. (new) The aggregate risk model of claim 32, wherein integration is further based at least in part on:

data representative of a covariance matrix (G) of the global factors;

data representative of a covariance matrix (Φ) of residuals; and

data representative of exposures (Y) of the factors (f) associated with the plurality of factor models to the one or more global factors (g).

34. (new) The aggregate risk model of claim 33, wherein integration is further based at least in part on:

data representative of a factor covariance matrix (F).

35. (new) The aggregate risk model of claim 34, wherein F is an initial estimate that is linearly rescaled with a matrix R, whereby a final estimate RFR^t is achieved, and wherein the diagonal blocks of the initial estimate are brought into agreement with the corresponding blocks of factor covariance matrices of the plurality of factor models.

36. (new) A computer implemented method for constructing an aggregate risk model for a plurality of asset classes, comprising the steps of:

integrating a plurality of factor models corresponding to the plurality of asset classes, where integration of the plurality of factor models is based at least in part on data derived from the steps comprising:

determining data associated with the plurality of factor models corresponding to the plurality of asset classes; and

determining an estimated factor model with one or more global factors (g) that captures the covariance among factors (f) associated with the plurality of factor models.

37. (new) The method of claim 36, wherein integration is further based at least in part on data derived from the steps comprising:

determining data representative of a covariance matrix (G) of the global factors;

determining data representative of a covariance matrix (Φ) of residuals; and

determining data representative of exposures (Y) of the factors (f) associated with the plurality of factor models to the one or more global factors (g).

38. (new) The method of claim 37, wherein integration is further based at least in part on data derived from the step comprising:

determining data representative of a factor covariance matrix (F).

39. (new) The method of claim 38, wherein F is an initial estimate, and further comprising the step of linearly rescaling the initial estimate with a matrix R, whereby a final estimate RFR^t is achieved, and wherein the diagonal blocks of the initial estimate are brought into agreement with the corresponding blocks of factor covariance matrices of the plurality of factor models.

40. (new) A computer implemented method for combining two or more risk models to provide an aggregate risk model for a plurality of asset classes, for risk analysis, comprising the steps of:

determining a factor risk model, having one or more factors, for each of the asset classes;

combining the factor risk models to form and output an aggregate risk factor model based at least in part on:

data associated with each of the factor risk models comprising: one or more time series of returns to the factors, a factor covariance matrix, and a specific covariance matrix

to form and output an aggregate risk model with wider scope than the factor risk models; and

wherein the aggregate risk model is consistent with each of the factor risk models.

41. (new) The method of claim 40, wherein the step of combining the factor risk models to form and output an aggregate risk factor model is further based at least in part on data associated with one or more global factors.

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